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## USHER'S BE-20

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# MUSICAL COMPREHENSION MACHINE

## Usher Audio Be-20 Loudspeaker

Chris Martens

photography by Adam Voorhes



Music appeals to me on multiple levels, beckoning first on the plane of pure emotion—evoking feelings I find too powerful, subtle, or complex to be framed as ideas or expressed in words. But it also stimulates me on an intellectual level, triggering profound curiosity. Something in me simply *needs* to know and understand how beautiful and complex things, such as the orchestration of a Mahler symphony or the intricacies of a Jaco Pastorius jazz bass solo, have been put together in the first place. For me, and I suspect for many of you, musical experiences involve both heart and mind—the pursuit of emotional enrichment and, at the same time, deeper comprehension of the structure of music and sound itself. Let me begin this product review, then, by saying that Usher Audio's flagship Be-20 loudspeakers (\$16,400/pair) are cutting-edge components that do an uncommonly fine job of addressing both halves of the musical equation—appealing to listeners' hearts and minds in equal measure, and with exceptionally high levels of refinement. What makes the Be-20s so special and how did Usher get so good at this game so fast? Let me answer both questions by giving a brief guided tour that charts the speaker's evolution.

As some of you already know, Usher Audio is a Taiwanese firm that has been making loudspeakers for over 30 years. In recent years Usher's top-tier speakers, collectively known as the Dancer series, have been designed primarily by company founder Mr. Tsai Lien-Shui, who handles core driver design and overall speaker configuration, working in collaboration with Dr. Joseph D'Appolito, who handles crossover tuning and helps

guide voicing of the speakers. What some TAS readers may not realize, however, is that Usher has spent years developing capabilities as a world-class driver manufacturer whose products can (and do) go toe-to-toe with the finest designs that European and Scandinavian driver specialists produce.

Some years ago I asked Dr. D'Appolito about the comparative benefits of Usher's drive units and he cited two particular areas where they are strong performers. First, Dr. D'Appolito told me, Usher drivers offer inherently low distortion, even at high volume levels, and second, they offer unusually symmetrical fore and aft diaphragm movements—owing to Usher's proprietary "Symme-Motion" technology. (You might think all high-end drivers would exhibit perfectly symmetrical pistonic movements, but I'm told this is not necessarily the case.).

Another dimension of Usher's expertise involves advanced materials technologies. In past years, Usher used to offer a high-end speaker that featured ceramic drivers sourced from Europe—drivers similar to those used in certain Kharma speakers. Usher was pleased with the overall sound of its ceramic-driver-equipped models, but felt the European drivers could be improved upon both in sonic performance and robustness. Accordingly, Usher began a development effort to create a new series of drivers based on beryllium (or more accurately, a light, stiff, and very strong ceramic material called beryllium oxide). The first



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result of this development effort turned out to be Usher's magnificent "beryllium" tweeter, which figures prominently in all Dancer models (including the CP-8571 Mk II Dancer I reviewed in TAS 154, and the Be-718 "Tiny Dancer" that Robert Harley reviewed in TAS 176). My conviction is that the Usher tweeter is among the top three or four voice-coil-driven high-frequency drivers on the planet, and from the standpoint of reproducing high frequencies in a manner that appeals to both heart and mind, I think it may be the very best of them all. While I would concede that certain tweeters, most notably the ScanSpeak Super Revelator, can perhaps confer a sense of *slightly* heightened transparency vis-à-vis the Usher tweeter, I personally find this extra transparency sometimes comes at the expense of highs that sound—how shall I put this?—ever so slightly "freeze-dried." In contrast, the Usher tweeter excels in its ability to convey tons of information while preserving two endearing qualities almost always heard in live music: inherent smoothness and a touch of natural sweetness. The only trick, really, lies in coming up with midrange drivers fast enough and subtle enough to keep up with Usher's beryllium-oxide tweeter.

For its CP-8571 Mk II and Be-718 speakers, Usher developed mid/bass drivers whose pulp/composite diaphragms come ever-so-close to matching the voicing of its beryllium tweeter. But, much though I respect both those designs (which offer stunning performance for the money), if you listen to either speaker very intently, you may discern extremely subtle speed and textural differences between their beryllium-oxide tweeters and pulp/composite-coned mid/bass drivers. However, in the Be-20 (and in its somewhat smaller sister model, the Be-10) these admittedly subtle discontinuities are banished completely, thanks to Usher's new beryllium-oxide midrange driver.

The new midrange driver, which was under development for roughly two years and the cause of more than a few delays in the Be-20's release schedule, was absolutely worth the wait. It is lightning fast, richly detailed, subtle as the day is long, a dynamic powerhouse, and—best of all—perfectly voice-matched to Usher's beryllium-oxide tweeter. Together, these two beryllium-oxide drivers come closer to the theoretical ideal of "speaking with one voice" than any other tweeter/midrange combo I've yet heard.

Completing the driver complement is a pair of 11-inch Eton woofers from Germany (similar to those used in the Avalon Eidolon) whose exotic composite diaphragms are said to be capable of prodigious excursions without breakup. The woofers and other drivers are housed in one of Usher's typically gorgeous, overbuilt cabinets.

The enclosure is loosely shaped like a swept-back boat

hull and is divided into two ducted chambers. The upper chamber houses the tweeter and midrange drivers, while the lower chamber houses the woofers and crossover assembly. Thick, curved cabinet walls are formed from laminated sheets of MDF, while the tilt-back front baffle is similarly milled from a thick MDF sandwich. On the inside, the woofer chamber deadens resonance through mass (sheets of dense metal are placed at key locations to damp vibrations), heavy felt blankets (which line the cabinet walls), and other damping materials. Near the bottom of the cabinet is a small chamber that can, at the user's option, be filled with lead shot or other mass-loading material. As a tasteful detail touch, the chamber features a machined-aluminum cover plate with two recessed pockets in which will be engraved the speaker's serial number and the owner's name. Then, at the very bottom of the enclosure is a heavy cast-metal floor plate faced with a synthetic, constrained-layer damping pad, which gets sandwiched between the floor plate and the Be-20's lovely, bolt-on hardwood floor plinths. The speaker comes with a set of beautifully machined floor spikes made of solid brass.

Let me be clear: The Be-20 is a big (55.1" high x 35.2" deep x 14.4" wide), heavy (293 pounds, each) and somewhat physically imposing speaker designed for use in medium-to-large-sized rooms (for medium-to-small rooms, the similar Be-10 would plainly be the better choice). Yet thanks to the enclosure's curved lines and stunning woodwork, the overall visual effect is more gracious than massive—making the Be-20's seem like "gentle giants."

The sound of the Be-20 is, at bottom, defined by the shared voice of its beryllium-oxide tweeter and midrange driver, and I would characterize that sound as possessing—in three equal parts—exceptional resolution, dynamic punch, and smoothness. Of these three qualities, the speakers' uncanny smoothness comes as perhaps the greatest surprise. Frankly, most speakers that can even come close to retrieving as much musical information as the Be-20s do are saddled, in some measure, with an underlying quality of cold, analytical sterility (bordering, at times, on edginess). But in contrast, the Be-20 simply goes about its business, presenting layer upon layer of sonic detail without imposing so much as a hint of edge, coldness, or glare. At bottom, it's this unexpected admixture of resolution, dynamics, and smoothness that makes the speaker so successful at engaging listener's heads and hearts at the same time.

On complex pieces rich in textural and transient details, such as the excerpt from Tavener's *Icons of Eros* found on Reference Recordings *30<sup>th</sup> Anniversary Sampler*, the Be-20 is

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really in its element. In the composition cited a series of passages alternates back and forth developing two motifs. One is a relatively fast-paced dance theme propelled by strings and medieval-sounding percussion instruments, while the other is a slower, more luxurious and more contemplative theme carried by strings and chorus. Tavener uses the sound of a deep gong to draw sharp lines of demarcation between the passages, and the entire recording is captured in what obviously is a highly reverberant acoustic space (after notes cease, reverberation tails seem to float in the air almost forever). For many loudspeakers, this much musical complexity captured in a resonant recording venue would be a recipe for sonic mush, but the Be-20 makes seeming child's play of disentangling the tightly interwoven instrumental voices and contributions of the recording space itself.

In the faster-paced dance passages, for example, you can easily hear the distinct, skin-taut voices of the individual percussion instruments, or the bowing techniques applied to individual stringed instruments. In fact, the Be-20s offer an open invitation to relax and follow individual instrumental threads within the larger whole, just as one might do at a live concert. And when Tavener's gong is sounded, oh my, the Be-20s made my whole listening room light up with the instrument's spectacular attack and then resonate with its dark, extended, shimmering overtones. But the biggest revelation comes in hearing the Be-20s handle the slower, more beguiling string and chorus passages. There, the Be-20 lets you tap straight into the quintessential warmth of the gentle strings—something more analytical speakers tend *not* to do—while simultaneously showing you the reverent hush that falls over the hall as the chorus quietly begins to sigh.

We can learn several things about the Be-20 from its performance on the Tavener piece. First, it effortlessly delineates complicated, multi-layered sonic details, yet does so—and this is very important—*without* shining a searchlight on its own prodigious resolving powers. Second, it captures much of the “feel” of hearing live instruments at play. In string passages from *Icons of Eros* the speakers sharply contrast the incisive cut and thrust of rapid bowing and the slower blooming warmth of sustained notes. Similarly, the Be-20s vividly exposed the elastic “pop” of individual skin-taut drumheads being struck, the subliminal mouth-sounds heard as well-trained chorus members began to sing, and especially the majestic way that the sound of the large gong came alive and then gradually decayed within the reverberant space. Finally, the Ushers remove conventional “hi-fi” artifacts to such an extent that the listener simply falls headfirst into the music, following individual melodic or instrument lines at will, just as at live events.



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The Be-20s allow listeners to connect with performances—as much on emotional as cognitive levels



What makes the Be-20 so good at conveying the elusive “feel” of real instruments? I think it has much to do with the way the speaker’s timbral, temporal, and dynamic qualities work in perfect synchrony—never as disparate characteristics drawing attention to themselves in isolation. The result is that the Be-20s allow listeners to connect with performances—as much on emotional as cognitive levels—in deeper ways than is often possible with other top-tier speakers.

The Be-20 also offers two or three other musically significant characteristics I should mention, the first of which is unconstrained dynamics. To state this simply, let me say that the Be-20 sounds more dynamically open and uncompressed than just about anything I’ve heard, short of some of the great horn loudspeaker designs. For example, whenever I played familiar recordings and adjusted volume levels on soft passages, thinking I had made appropriate allowances for louder passages to follow, the Be-20s consistently surprised me by revealing the ensuing crescendos to be much more explosive and energetic than I had ever imagined. In short, if what the Be-20s are doing is right—and I think that it is—then an awful lot of the speakers I have heard have been guilty of compressing or quashing dynamics, at least to some degree.

An interesting example can be drawn from “Moten Swing” on Clark Terry’s *Chicago Sessions 1995-96* [Reference Recordings]. As the beautifully recorded song begins it initially seems to have quiet and subdued dynamics until, about 30 seconds in, a trumpet section simply *erupts*—snapping you to attention with its power and presence. The Ushers flat out nailed the swagger of that trumpet section coming to life in a way that, in my experience, leaves most other speaker systems sounding a bit mechanical and lifeless. Later, at 1:34 into the cut, the Ushers again surprised me by showing how the De Paul University Big Band suddenly and dramatically stepped up its energy level to make an emphatic musical point. Over time, the Ushers gradually condition listeners to expect *much* wider dynamic range from familiar recordings than they may ever have experienced before. With these speakers, you experience dynamic shifts not only as changes in volume, but as changes in physical sensation. You get the sense that you can both hear *and* feel the energy-level of the performers rise and fall, which is a revelation.

Next, I would draw attention to the Be-20’s imaging and soundstaging, which are uniformly superb with great analog source material, though perhaps not quite as good with typical digital source material. When recordings are up to the task, the Ushers do a wonderfully holographic job of placing performers in precise locations onstage, and of revealing the overall size and acoustics of recording venues. The only catch, I found, is that the Be-20 is not particularly tolerant of recordings where mixing engineers have ham-fistedly pushed performers hard to the left- or right-hand sides of the soundstage. In such cases, the Be-20’s normally three-dimensional presentation tends to collapse, at least to a degree. Good though the Be-20’s spatial characteristics are, however, I suspect Usher could improve the speaker further still by eliminating sharp creases

## SPECS & PRICING

Type: Three-way, four-driver, floorstanding dynamic loudspeaker

Driver complement: One 1.25" beryllium-oxide dome tweeter, one 5" beryllium-oxide mid/bass driver, two 11" Eton composite woofers  
Impedance: 8 ohms  
Sensitivity: 90dB/1W/1m  
Frequency response: 22Hz-40kHz, +0/-3db  
Power handling: 200 watts  
Crossover frequencies: 544Hz and 3.84kHz  
Dimensions: 14.4" x 55.1" x 35.2"  
Weight: 293 lb. each  
Price: \$16,400/pair

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To appreciate what the Be-20s can do down low that many other top-tier speakers cannot, try listening to the opening movement of the Abbado/Chicago performance of Prokofiev's *Lieutenant Kijé* Suite [Deutsche Grammophon, LP]. The movement begins quietly enough, but within about a minute reaches a point where loud concert bass drum "thwacks" signal a shift in mood. Now any top-tier speaker worthy of the term will produce a loud, low sound when those bass drum notes arrive. But what the Usher does is convey the sensation of massive bass wavefronts moving from the front of the hall to the rear like sonic tsunami waves—a sensation I find highly lifelike and compelling. It's the ability to reproduce those big, almost tactile low-frequency wavefronts that sets the Be-20 apart. Similarly, if you listen to rock or fusion jazz recordings that prominently feature bass guitars, you will again find the Be-20s faithfully capture the instruments' ability to momentarily pressurize rooms with bass energy—especially when slap-style bassists attack their strings with real vigor. I played the Be-20s for an accomplished electric bassist and he listened, plainly awe-struck, and then commented that they were the *only* high-end speaker he had ever heard that could convincingly create the illusion of hearing real electric basses played in small club or theater settings. The bottom line is that if "power music" with meaningful bass content is part of your listening repertoire, the Be-20 (or Be-10) could be a great speaker for you.

### Conclusion

Having lived with the Usher Be-20 for many months, and having heard many of its closest competitors (almost all of which fall in a higher, \$20-30k per-pair price class), I feel confident in saying that the Be-20 offers terrific value for money, exhibiting two qualities most music lovers prize. The speakers retrieve sufficiently deep levels of musical information to fully engage our minds, while at the same time conveying the more vibrant, emotive, soulful elements of music in ways that will surely win our hearts. In short, the Be-20s are wonderful machines that foster deeper comprehension of music—in *all* its aspects. **TAS**

on the front baffle plate and giving the baffle more deeply and smoothly radiused surfaces (much as Revel has done with its new Salon2).

Finally, I must comment on the Be-20's bass, which is at once well-defined, deeply extended, and very powerful. Whether you find the Be-20's bass balance slightly too prominent or "just right" will, I think, be both a matter of taste and the size of your listening room. Understand that the Be-20 is voiced to sound well-balanced in larger rooms, even when playing what Jonathan Valin calls "power music" (think Mahler symphonies, high-energy rock, and the like). When used in inappropriately undersized spaces the Be-20's bass can and will overload rooms; for smaller spaces the Be-10, which is a down-sized, single-woofer version of the Be-20, would clearly be the better solution. I should also mention that, on a qualitative level, the Be-20's low-frequency presentation is quite different from that of, say, speakers such as the Magico V3s. Based on my admittedly limited experience with the Magicos, I would say the V3s perhaps enjoy an edge in tautness and almost pluperfect critical bass damping, while the Ushers offer arguably deeper (and in some instances more realistic) reserves of mid-to-low bass energy and punch. Of course what one man hears as ideal bass, another might perceive as bass that is overblown.

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